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NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER
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GUILL, RUSSELL L

ART UNIT	PAPER NUMBER
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2123

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05/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/507,002	BRACEWELL, ROBERT H	
	<b>Examiner</b>	<b>Art Unit</b>	
	Russ Guill	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☒ Claim(s) 1,12,13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/8/2004, 12/22/2004</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is a first Office Action for an application dated September 8, 2004. Claims 52 - 54 were canceled. Claims 1 - 51 are pending. Claims 1 - 51 have been examined. Claims 1 - 51 have been rejected.

#### *Specification*

2. The disclosure is objected to because of the following informalities:
- On page 21, line 21, the word "liekly" appears to mean "likely".
  - On page 23, line 13, the word "vis" appears to mean "via".
  - On page 23, line 15, the word "bi-product" appears to mean "by-product".

#### *Claim Objections*

3. Claim 1 is objected to because of the following informalities: The claim recites in line 8, "Adapted to". The following limitations appear to be intended use statements.
4. Claim 13 is objected to because of the following informalities: The claim recites, "in either claim 12". The word, "either" appears to be superfluous.
5. Claim 22 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim depends from a multiply dependent claim 18. See MPEP § 608.01(n).
6. Claim 30 is objected to because of the following informalities: The claim recites, "the tunneling link". It appears to mean, "the tunneling links".
7. Claim 33 is objected to because of the following informalities: The claim recites in line 3, "the first design project". It appears to mean, "a first design project".
8. Claim 34 is objected to because of the following informalities: The claim recites in line 3, "the first design rationale". It appears to mean, "the design rationale".

9. Claim 35 is objected to because of the following informalities: The claim recites in line 3, "the first design rationale". It appears to mean, "the design rationale".
10. Claim 35 is objected to because of the following informalities: The claim appears to be identical to claim 34.
11. Claim 39 is objected to because of the following informalities: The claim recites in lines 3 - 4, "information includes". It appears to mean, "information and includes".
12. Claim 39 is objected to because of the following informalities: The claim recites in line 7, "predefine file". It appears to mean, "predefined file".

*Claim Rejections - 35 USC § 112*

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- a. Claims 21 - 23, 28 - 29, 30 - 31, 37, 48 - 49 and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- i. Regarding claim 21, the claim recites, "the additional node". The phrase appears to have insufficient antecedent basis. For the purpose of claim examination, the phrase is interpreted as "an additional node". Correction or amendment is required.
- ii. Regarding claim 23, the claim recites, "the sub-issue". The phrase appears to have insufficient antecedent basis. Since the parent claim 22 does not have a valid parent claim, the phrase has insufficient antecedent basis. For the purpose of claim examination, the phrase is interpreted as "a sub-issue". Correction or amendment is required.

- iii. Regarding claim 28, the claim recites, "each of the nodes". The phrase appears to have insufficient antecedent basis. For the purpose of claim examination, the phrase is interpreted as "each node". Correction or amendment is required.
- iv. Regarding claim 29, the claim recites, "the first two-dimensional representation". The phrase appears to have insufficient antecedent basis. For the purpose of claim examination, the phrase is interpreted as "a first two-dimensional representation". Correction or amendment is required.
- v. Regarding claim 37, the claim recites, "the step of capturing the design rationale in graphical format". The phrase appears to have insufficient antecedent basis. For the purpose of claim examination, the claim is interpreted as "A method according to claim 33 further comprising capturing the design rationale in graphical format utilizing the nodes of a graph editor". Correction or amendment is required.
- vi. Regarding claim 48, the claim recites in lines 2 - 3, "according to the method described above". Since there are numerous methods described above, is unclear which method is intended. For the purpose of claim examination, the phrase is interpreted as, "according to the method of claim 47".
- vii. Regarding claim 49, the claim recites in line 5, "according to the method described above". Since there are numerous methods described above, is unclear which method is intended. For the purpose of claim examination, the phrase is interpreted as, "according to the method of claim 48".
- viii. Regarding claim 51, the claim recites in lines 2 - 3, "according to the method described above". Since there are numerous methods described above, is unclear which method is intended. For the purpose of claim

examination, the phrase is interpreted as, "according to the method of claim 50".

ix. **Claims 22 and 30 - 31** are rejected based on their dependency on their respective intermediate and parent claims which are rejected under 35 U.S.C. 112, second paragraph.

***Claim Rejections - 35 USC § 101***

14. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15. Claims 24 - 32, 34, 35 - 36, 38, 40, 42 and 47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

a. Regarding claim 24 and dependent claims, the recited knowledge modeling tool appears to be entirely software, which is at best functional descriptive material per se, and is therefore non-statutory. Further, the claim appears to contain abstract ideas such as capturing a first design rationale, and therefore, in order to be statutory, the claim must be directed to a practical application having a concrete, useful and tangible result. The claims do not appear to have a tangible result to support a practical application.

b. Regarding claim 34, the recited method appears to contain abstract operations such as processing a graphical format, and therefore, in order to be statutory, the claim must be directed to a practical application having a concrete, useful and

tangible result. The claim does not appear to have a tangible result to support a practical application.

c. Regarding claim 35 and dependent claims, the recited method appears to contain abstract operations such as processing a graphical format, and therefore, in order to be statutory, the claim must be directed to a practical application having a concrete, useful and tangible result. The claim does not appear to have a tangible result to support a practical application.

d. Regarding claim 38, the claim appears to contain abstract ideas such as capturing a design rationale, and therefore, in order to be statutory, the claim must be directed to a practical application having a concrete, useful and tangible result. The claim does not appear to have a tangible result to support a practical application, and is therefore non-statutory.

e. Regarding claim 40, the claim appears to contain abstract ideas such as capturing a design rationale, and therefore, in order to be statutory, the claim must be directed to a practical application having a concrete, useful and tangible result. The claim does not appear to have a tangible result to support a practical application, and is therefore non-statutory.

f. Regarding claim 42, the claim appears to contain abstract ideas such as capturing a design rationale, and therefore, in order to be statutory, the claim must be directed to a practical application having a concrete, useful and tangible result. The claim does not appear to have a tangible result to support a practical application, and is therefore non-statutory.

g. Regarding claim 47, the claim is directed to a data storage medium on which is stored a computer program. Broadly interpreted, the computer program may be source code, which is non-functional material. A claim directed to non-

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functional material recorded on a data storage medium is non-statutory because no functionality may be accomplished by combining the data storage with a processor.

h. Regarding claims 44 - 46, the claims are directed to a computer program, which is at best functional descriptive material per se, and is therefore non-statutory.

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. **Claims 24 - 28, 32, 34, 35, 36, 38, 40 and 45** are rejected under 35 U.S.C. 102(b) as being anticipated by Conklin (Jeff Conklin et al.; "gIBIS: A Hypertext Tool for Exploratory Policy Discussion", art provided by the Applicant on the Information Disclosure Statement dated December 22, 2004).

a. Regarding **claim 24**:

b. Conklin appears to teach:

c. A knowledge modelling tool having an interactive graph editor to capture a first design rationale of a first design project (page 306, figure 2);

d. the first design rationale containing data on at least one design issue (page 305, figure 1, element labeled ISSUE; and page 304, last paragraph, continued on page 305, first paragraph);



e. a processing means to allow the first design rationale to be identified when the at least one design issue is encountered on a subsequent design project (page 310, figure 9 and section 3.2 The Node Index Window).

f. Regarding claim 25:

g. Conklin appears to teach:

h. an issue-based information system (page 303 (first page), Abstract).

i. Regarding claim 26:

j. Conklin appears to teach:

k. the design rationale is captured in nodes of the graph editor (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .", and fifth paragraph; it would have been obvious that the data entered were labels on a node).

l. Regarding claim 27:

m. Conklin appears to teach:

n. the nodes are part of a two-dimensional representation of the design rationale (page 306, figure 2).

o. Regarding claim 28:

p. Conklin appears to teach:

q. dependencies between the design rationale at each of the nodes is represented by a directed link (page 305, figure 1, please note the directed links between the nodes).

r. Regarding claim 32:

s. Conklin appears to teach:

t. an interactive graph editor which enables a user to modify features of an output in order that the features can be differentiated more

clearly one from another (page 312, figure 11, graph config parameters).

u. Regarding claims **34 and 40**:

v. Conklin appears to teach:

w. A method for capturing and reusing a design rationale of a first project (pages 304 - 305, and page 303, Abstract), the design rationale containing data on at least one design issue (page 305, figure 1, element labeled ISSUE; and page 304, last paragraph, continued on page 305, first paragraph), including the steps of:

x. capturing the design rationale in a graphical format (page 306, figure 2, and page 310, figure 9);

y. processing the graphical format to allow the first design rationale to be identified when the at least one design issue is encountered on a second design project (page 310, figure 9 and section 3.2 The Node Index Window).

z. Regarding claim **35**:

aa. Conklin appears to teach:

bb. A method for capturing and reusing a design rationale of a first project (pages 304 - 305, and page 303, Abstract), the design rationale containing data on at least one design issue (page 305, figure 1, element labeled ISSUE; and page 304, last paragraph, continued on page 305, first paragraph), including the steps of:

cc. capturing the design rationale in a graphical format (page 306, figure 2, and page 310, figure 9);

dd. processing the graphical format to allow the first design rationale to be identified when the at least one design issue is encountered on a second design project (page 310, figure 9 and section 3.2 The Node Index Window).

ee. Regarding claim **36**:

ff. Conklin appears to teach:

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gg. utilising an issue-based information system (page 303 (first page), Abstract).

hh. Regarding claims 38 and 45:

ii. Conklin appears to teach:

jj. A computer programmed to capture and reuse a design rationale of a first project, the design rationale containing data on at least one design issue (pages 304 - 308).

### *Claim Rejections - 35 USC § 103*

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 1 - 15, 18 - 19, 21, 33, 37, 39, 41, 43, 44, 47 - 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin (Jeff Conklin et al.; "gIBIS: A Hypertext Tool for Exploratory Policy Discussion", art provided by the Applicant on the Information Disclosure Statement dated December 22, 2004) in view of Hirose (U.S. Patent Number 5,784,286).

- a. The art of Conklin is directed to a design knowledge capture tool (unnumbered first page assumed to be page 303).
- b. The art of Hirose is directed to a design knowledge capture tool (column 2, lines 65 - 67).

c. The art of Conklin and the art of Hirose are analogous art because they are both directed to the art of a design knowledge capture tool.

d. Regarding **claim 1**:

e. Conklin appears to teach:

f. a storage means for storing design knowledge information generated or acquired during progress of a first design project, wherein the design knowledge information extends beyond product design information and includes information on evolution of a first design project and causal dependencies (pages 304 - 305, section 2. THE IBIS METHOD, and page 305, figure 1; it would have been obvious that a storage means was used to store the information);

g. an input means for allowing a user to input information into the storage means (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .");

h. a presentation means for presenting the design knowledge and product design information (page 306, figure 2);

i. wherein the input means that is adapted to select a predefined file (page 306, figure 2; it would have been obvious that a predefined file was selected to load the network into the browser window);

j. with a list of at least one predefined issue to be addressed (page 305, figure 1, element labeled ISSUE; and page 304, last paragraph, continued on page 305, first paragraph; it would have been obvious that a set of issues were stored, and later retrieved by users to provide positions);

k. presents a file template to the user to allow the information to be input by the user in a predefined knowledge structure (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .", and fifth paragraph);

l. each piece of the information being input as a label of a node (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .", and fifth paragraph; it would have been obvious that the data entered were labels on a node).

m. Conklin does not specifically teach (in ***bold italic underline***):

n. wherein the input means ***includes a design stage or task classification means*** that is adapted to select a-predefined file

o. Hirose appears to teach:

p. wherein the input means includes a design stage or task classification means (figure 5, upper left quadrant, stage records, and column 6, lines 9 - 20; it would have been obvious that there was input means for the stage).

q. The motivation to use the art of Hirose with the art of Conklin would have been the benefits recited in Hirose including a cost effective, useful and inexpensive design process recorder that benefits design and redesign (column 4, lines 9 - 20).

r. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Hirose with the art of Conklin to produce the claimed invention.

s. Regarding claims 33, 41, 44, 47, 48, 49, 50 and 51:

t. Conklin appears to teach:

u. A method for capturing design knowledge information wherein the information extends beyond product design information and includes information on evolution of the first design project and causal dependencies (page 305, figure 1; and page 306, figure 2);

v. storing the information generated or acquired during progress of a first design project in a storage means (pages 304 - 305, section 2. THE IBIS METHOD, and page 305, figure 1; it would have been obvious that the information was stored);

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- w. inputting information into the storage means (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .");
- x. presenting the information, during the step of inputting the information (page 306, figure 2, and page 308, figure 5);
- y. selecting a predefined file (page 306, figure 2; it would have been obvious that a predefined file was selected to load the network into the browser window);
- z. with a list of predefined issues to be addressed (page 305, figure 1, element labeled ISSUE; and page 304, last paragraph, continued on page 305, first paragraph; it would have been obvious that a set of issues were stored, and later retrieved by users to provide positions);
- aa. presenting a file template for inputting the information into a predefined knowledge structure (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .", and fifth paragraph);

bb. Conklin does not specifically teach:

cc. classifying a design stage;

dd. Hirose appears to teach:

ee. classifying a design stage (figure 5, upper left quadrant, stage records, and column 6, lines 9 - 20; it would have been obvious that there was input means for the stage);

ff. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Hirose with the art of Conklin to produce the claimed invention.

gg. Regarding claim 39 and 43:

hh. Conklin appears to teach:

ii. A computer programmed to capturing design knowledge information, the design knowledge information being generated or acquired during a progress of a first design project wherein the information extends

beyond product design information and includes information on evolution of the first design project and causal dependencies (page 305, figure 1; and page 306, figure 2);

jj. storing the information in a storage means (pages 304 - 305, section 2. THE IBIS METHOD, and page 305, figure 1; it would have been obvious that the information was stored);

kk. input means for inputting information into the storage means (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .");

ll. selecting a predefined file (page 306, figure 2; it would have been obvious that a predefined file was selected to load the network into the browser window);

mm. with a list of predefined issues to be addressed (page 305, figure 1, element labeled ISSUE; and page 304, last paragraph, continued on page 305, first paragraph; it would have been obvious that a set of issues were stored, and later retrieved by users to provide positions);

nn. presenting a file template to a user to allow the information to be input by the user in a predefined knowledge structure (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .", and fifth paragraph);

oo. Conklin does not specifically teach:

pp. By first classifying a design stage;

qq. Hirose appears to teach:

rr. By first classifying a design stage (figure 5, upper left quadrant, stage records, and column 6, lines 9 - 20; it would have been obvious that there was input means for the stage);

ss. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Hirose with the art of Conklin to produce the claimed invention.

tt. Regarding claim 2:

uu. Conklin appears to teach:

vv. An interactive graph editor (page 306, figure 2).

ww. Regarding claim 3:

xx. Conklin appears to teach:

yy. The graph editor comprises the label of the node and the node (page 306, figure 2).

zz. Regarding claim 4:

aaa. Conklin appears to teach:

bbb. in use, a user is prompted by the knowledge structure, to input at least one possible answer to the at least one predefined issue, the at least one possible answer being stored as one of the, or each, piece of information at the label of the node (page 307, last paragraph, extending on to page 308, and page 308, figure 5).

ccc. Regarding claim 5:

ddd. Conklin appears to teach:

eee. the knowledge structure prompts the user to input at least one argument that supports or refutes the possible answer, the at least one argument being stored as one of the, or each, piece of information at the label of the node (page 305, figure 1, especially the box labeled "argument", and page 307, last paragraph, extending on to page 308, and page 308, figure 5).

fff. Regarding claim 6:

ggg. Conklin appears to teach:



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hhh. the at least one argument is classified as a supporting or a refuting argument (page 305, figure 1, especially the links labeled "supports" and "objects-to").

iii. Regarding claim 7:

jjj. Conklin appears to teach:

kkk. the at least one argument can be readily identified by the user as classified as the supporting or the refuting argument (page 312, figure 11, graph config parameters, elements "supports" and "Objects to").

III. Regarding claim 8:

mmm. Conklin appears to teach:

nnn. said at least one argument is classified as a valid or an invalid argument (page 312, figure 11, graph config parameters, element "argument display bias").

ooo. Regarding claim 9:

ppp. Conklin appears to teach:

qqq. the at least one argument is readily identified by the user and classified as the valid or the invalid argument (page 312, figure 11, graph config parameters, element "argument display bias").

rrr. Regarding claim 10:

sss. Conklin appears to teach:

ttt. the at least one answer is classified as an open, an accepted or rejected answer (page 305, second paragraph; answers are open).

uuu. Regarding claim 11:

vvv. Conklin appears to teach:

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www. the at least one answer is readily identified by the user as classified as the open, the accepted or the rejected answer (page 305, second paragraph; answers are open).

xxx. Regarding claim 12:

yyy. Conklin appears to teach:

zzz. the, or each, piece of information stored at the labelled node is supported by at least one text statement (page 307, last paragraph, extending on to page 308, and page 308, figure 5).

aaaa. Regarding claim 13:

bbbb. Conklin appears to teach:

cccc. the at least one predefined issue is supported by the at least one text statement (page 307, last paragraph, extending on to page 308, and page 308, figure 5).

dddd. Regarding claim 14:

eeee. Conklin appears to teach:

ffff. the at least one text statement can be readily identified by the user as believed true or false (page 312, figure 11, graph config parameters, element "argument display bias").

gggg. Regarding claim 15:

hhhh. Conklin appears to teach:

iiii. the node appears once only in the predefined file (page 306, figure 2).

jjjj. Regarding claim 18:

kkkk. Conklin appears to teach:

llll. a sub-issue to the at least one predefined issue can be identified and input into the storage means (page 305, figure 1, links to the box "issue", labeled "REPLACES, QUESTIONS OR IS-SUGGESTED-BY").

mmmm. Regarding claim 19:

nnnn. Conklin appears to teach:

oooo. a user is prompted to input at least one possible answer to the sub-issue (page 307, last paragraph, extending on to page 308, and page 308, figure 5).

pppp. Regarding claim 21:

qqqq. Conklin appears to teach:

rrrr. the sub-issue can be linked to the additional node (page 306, figure 2; note the issues linked to issues).

ssss. Regarding claim 37:

tttt. Conklin appears to teach:

uuuu. the step of capturing the design rationale in graphical format incorporates the step of utilising nodes of a graph editor (page 306, figure 2).

20. **Claims 42 and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin (Jeff Conklin et al.; "gIBIS: A Hypertext Tool for Exploratory Policy Discussion", art provided by the Applicant on the Information Disclosure Statement dated December 22, 2004) in view of Regli (W.C. Regli et al.; "A Survey of Design Rationale Systems: Approaches, Representation, Capture and Retrieval", 2000, Engineering with Computers, Volume 16, pages 209 - 235).

a. The art of Conklin is directed to a design knowledge capture tool (unnumbered first page assumed to be page 303).

- b. The art of Regli is directed to a design rationale capture tools (page 209, Abstract).
- c. The art of Conklin and the art of Regli are analogous art because they are both directed to the art of a design knowledge capture tools.
- d. Regarding claims 42 and 46:
- e. Conklin appears to teach:
  - f. A computer programmed to capturing design knowledge information, the design knowledge information is generated or acquired during progress of a first design project, the information extending beyond product design information and including information on evolution of the first design project and causal dependencies (page 305, figure 1; and page 306, figure 2);
- g. Conklin does not specifically teach:
- h. causal dependencies leading from one design to another;
- i. Regli appears to teach:
- j. causal dependencies leading from one design to another (page 210, right-side column, last sentence, extending on to page 211; it would have been obvious that causal dependencies lead from one design to another, especially in view of the hyperlink format of the invention of Conklin);
- k. The motivation to use the art of Reglis with the art of Conklin would have been the benefit recited in Reglis that keeping track of design rationale will provide a great aid to designers, and provides a basis for designers to explore more design options (page 209, right-side column, second paragraph that starts with, "Usually a developed . . .")

1. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Reglis with the art of Conklin to produce the claimed invention.

21. Claims 16 - 17, 20, 22 - 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin as modified by Hirose (U.S. Patent Number 5,784,286) as applied to claims 1 - 15, 18 - 19, 21, 33, 37, 39, 41, 43, 44, 47 - 51 above, further in view of Regli.

a. The art of Conklin as modified by Hirose teaches a design knowledge capture tool as recited in claims 1 - 15, 18 - 19, 21, 33, 37, 39, 41, 43, 44, 47 - 51 above.

b. Regarding claim 16:

c. Conklin does not specifically teach:

d. the, or each, piece of information stored at the label of the node can be linked to a node on a previously input file where the, or each, piece of information has previously been raised.

e. Regli appears to teach:

f. the, or each, piece of information stored at the label of the node can be linked to a node on a previously input file where the, or each, piece of information has previously been raised (page 210, right-side column, last sentence, extending on to page 211, and page 224, section 6.1 Navigating Archived Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links could be linked to a node on a previously input file).

g. The motivation to use the art of Reglis with the art of Conklin as modified by Hirose would have been the benefit recited in Reglis that keeping track of design rationale will provide a great aid to designers, and provides a basis for designers to explore more design options (page 209, right-side column, second paragraph that starts with, "Usually a developed . . .")

h. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Reglis with the art of Conklin as modified by Hirose to produce the claimed invention.

i. Regarding claim 17:

j. Conklin does not specifically teach:

k. the, or each, piece of information stored at the label of the node can be linked to an additional node on the predefined file, wherein the, or each, piece of information has previously been raised.

l. Regli appears to teach:

m. the, or each, piece of information stored at the label of the node can be linked to an additional node on the predefined file, wherein the, or each, piece of information has previously been raised (page 224, section 6.1 Navigating Archived Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links could be linked to a node on the pre-defined file).

n. Regarding claim 20:

o. Conklin does not specifically teach:

p. the sub-issue can be linked to a previously input file.

q. Regli appears to teach:

r. the sub-issue can be linked to a previously input file (page 210, right-side column, last sentence, extending on to page 211, and page 224, section 6.1 Navigating Archived Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links could be linked to a node on a previously input file).

s. Regarding claim 22:

t. Conklin does not specifically teach:

u. a processing means to identify at least one predefined issue addressed on a first design project, which issue is encountered on a subsequent design project.

v. Regli appears to teach:

w. a processing means to identify at least one predefined issue addressed on a first design project, which issue is encountered on a subsequent design project (page 210, right-side column, last sentence, extending on to page 211, and page 224, section 6.1 Navigating Archived Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links could be linked to a node on a subsequent design project).

x. Regarding claim 23:

y. Conklin appears to teach:

z. the at least one predefined issue derives from the sub-issue (page 306, figure 2; note the issues linked to issues).

**22. Claims 29 - 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin as applied to claims 24 - 28, 32, 34, 35, 36, 38, 40 and 45 above, in view of Regli.**

a. The art of Conklin teaches a knowledge modeling tool as recited in claims **24 - 28, 32, 34, 35, 36, 38, 40 and 45** above.

b. Regarding claim 29:

c. Conklin does not appear to teach:

d. tunnelling links that appear to tunnel into the first two-dimensional representation reappear elsewhere, either on the first two-dimensional representation or a second two-dimensional representation.

e. Regli appears to teach:

f. tunnelling links that appear to tunnel into the first two-dimensional representation reappear elsewhere, either on the first two-

dimensional representation or a second two-dimensional representation (page 210, right-side column, last sentence, extending on to page 211, and page 224, section 6.1 Navigating Archived Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links would appear to tunnel and re-appear elsewhere).

g. Regarding claim 30:

h. Conklin appears to teach:

i. a first end of the tunnelling link is represented by a first icon and a second end of the tunnelling links is represented by a second icon (page 306, figure 2; please note the various icons).

j. Regarding claim 31:

k. Conklin does not appear to teach:

l. the first and second icons are designed such that double clicking on the first icon causes the tunnelling link to be traversed to the second icon, and double clicking on the second icon causes the tunnelling link to be traversed to the first icon.

m. Regli appears to teach:

n. the first and second icons are designed such that double clicking on the first icon causes the tunnelling link to be traversed to the second icon, and double clicking on the second icon causes the tunnelling link to be traversed to the first icon (page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links would tunnel between icons).

**23. Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully



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consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

### *Conclusion*

24. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure:

- a. Jintae Lee, "Design Rationale Systems: Understanding the Issues", 1997, IEEE Expert, Volume 12, Issue 3, pages 78 - 85; teaches reuse across designs (page 79, left-side column).
- b. Harri Oinas-Kukkonen, "Embedding Hypermedia into Information Systems", 1997, Proceedings of the Thirtieth Hawaii International Conference on System Sciences, pages 187 - 196; teaches hyperlink navigation.
- c. Colin Potts et al.; "Recording the Reasons for Design Decisions", 1988, Proceedings of the tenth international conference on software engineering, pages 418 - 427; teaches a design recording method.
- d. Colin Potts, "A Generic Model for Representing Design Methods", 1989, eleventh international conference on software engineering, pages 217 - 226; teaches a design recording method.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is 571-272-7955. The examiner can normally be reached on Monday - Friday 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for

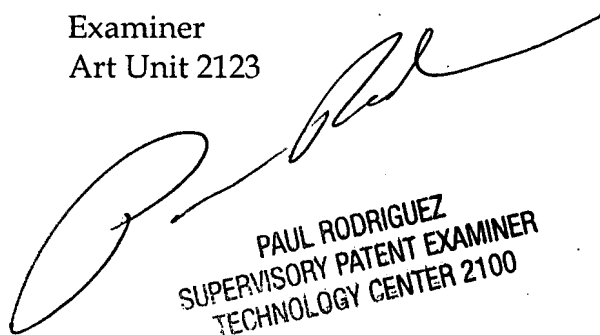
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the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RG

Russ Guill  
Examiner  
Art Unit 2123



PAUL RODRIGUEZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100